LACASSE & ASSOCIATES

PROFESSIONAL PATENT SERVICES
1725 Duke Street, Suite 650
Alexandria, Virginia 22314
Phone (703) 838-7683/Facsimile (703) 838-7684
E-Mail: patserv@lacasse-patents.com

CONFIDENTIAL
FACSIMILE TRANSMITTAL SHEET

DATE SENT: June 17, 2003

DELIVER TO:

Name: Examiner Chanh Duy Nguyen

Company: USPTO, GAU 2675

Phone No: 703-308-6603

Fax No: 703-872-9314

FROM: Ramraj Soundararajan

SERIAL NO.: 09/649,608

OUR DOCKET: ARC9-2000-0027-US1

THERE WILL BE A TOTAL OF 5 PAGE(S) INCLUDING THIS COVER SHEET.
OUR FACSIMILE MACHINE COMMUNICATES WITH ALL GROUP III, II AND FM6
MACHINES.

NOTICE: The documents transmitted by this facsimile are intended for the use of the individual or the entity to which it is addressed and may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of the message is not the intended recipient, or the employee, or agent responsible for delivering this document to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original facsimile to us at the above address via the Postal Service.

PLEASE ACKNOWLEDGE & RETURN
  X   DRAFT FOR INTERVIEW PURPOSES ONLY

DOCKET: ARC9-2000-0027-US1   SERIAL NO.:   09/649,608

IN RE APPL. OF: Campbell et al.

TITLE: *Method and System for the Recognition of Reading, Skimming, and Scanning from Eye-Gaze Patterns*

PGS OF SPEC: _____	PGS OF CLAIMS: _____	PGS OF DRAWINGS: _____
AGENTS: Randy W. Lacasse		TOTAL CHARGES: $0.00
Jaclyn A. Schade		
Ramraj Soundararajan		

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Campbell et al.

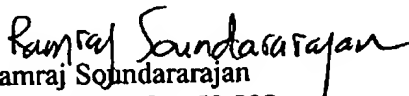Serial No.: 09/649,608

Group Art Unit: 2675

Filed: 8/29/2000

Examiner: Chanh Duy Nguyen

Title: *Method and System for the Recognition of Reading, Skimming, and Scanning from Eye-Gaze Patterns*

DRAFT FOR INTERVIEW PURPOSES ONLY

Commissioner of Patents
and Trademarks
Box Non-Fee Amendment
Washington, D.C. 20231

Sir:

We want to thank the Examiner for his efforts in the interview of this morning, June 17, 2003. We have set forth proposed changes to independent claims 1, 12, 23, 24, and 25 (a marked-up copy of which is hereby attached in Appendix A) which may assist in clarification of claim elements. If the Examiner believes that it would be beneficial to discuss technical issues, rejected claims, and prior art with regard to the final rejection of the pending patent application in further detail, another interview can be scheduled at the Examiner's convenience.

Respectfully submitted,

Ramraj Soundararajan
Registration No. 53,832

1725 Duke Street
Suite 650
Alexandria, Virginia 22314
(703) 838-7683
June 17, 2003

APPENDIX A

Marked-Up Claims

1   1.   A method for recognizing reading, skimming, and scanning modes from eye-gaze

2   patterns, said method comprising the steps of:

3   quantizing eye movements of a user viewing heterogeneous content in both X and Y

4   axes;

5   accumulating a numerical evidence of reading until a predetermined threshold is reached,
                                                                    positive
6   said numerical evidence independent of gaze time and factoring both ~~incremental~~ and
            negative
7   ~~decremental~~ values; and

8   detecting reading when said numerical evidence of reading exceeds said threshold.

1   12.   A system for recognizing reading, skimming, and scanning modes from eye-gaze

2   patterns, said system comprising:

3   an eye-movement quantizer that quantizes eye movements of a user viewing

4   heterogeneous content in both X and Y axes;

5   a reading-evidence accumulator that accumulates a numerical evidence of reading, said

6   numerical evidence independent of gaze time and factoring both incremental and

7   decremental values;

8   a threshold-comparator that compares said numerical evidence of reading against a

9   predetermined threshold; and

10   a reading-detector that detects reading when said numerical evidence of reading exceeds

11   said predetermined threshold.

23.   A system for recognizing reading, skimming, and scanning modes from eye-gaze

1   patterns, said system comprising:

2

3   means for quantizing eye movements of a user viewing heterogeneous content in both X

4   and Y axes;

5   means for accumulating a numerical evidence of reading, said numerical evidence

6   independent of gaze time and factoring both incremental and decremental values;

7   means for comparing said numerical evidence of reading against a predetermined

8   threshold; and

9   means for detecting reading when said numerical evidence of reading exceeds said

10   predetermined threshold.

24.   An article of manufacture comprising a computer program product having a machine-

1   readable medium including computer program instructions embodied therein for

2

3   recognizing reading, skimming, and scanning from eye-gaze patterns with:

4   computer program instructions for quantizing eye movements of a user viewing

5   heterogeneous content in both X and Y axes, said quantizing based on averaging over a

6   predetermined period of time;

7   computer program instructions for accumulating a numerical evidence of reading until a

8   predetermined threshold is reached, said numerical evidence independent of gaze time

9   and factoring both incremental and decremental values;

Page 3 of 4

10   computer program instructions for detecting reading when said numerical evidence of

11   reading exceeds said predetermined threshold; and

12   computer program instructions for switching modes from a scanning mode and a

13   skimming mode to a reading mode when reading is detected.

1   25.   An article of manufacture comprising a computer program product having a machine-

2   readable medium including computer program instructions embodied therein for utilizing

3   user interest information to adapt a computer to a user's needs with:

4   computer program instructions for recording eye-gaze patterns of said user viewing

5   heterogeneous content;

6   computer program instructions for determining from said recorded patterns whether said

7   user is reading, skimming, and scanning based upon accumulated numerical evidence,

8   said numerical evidence independent of gaze time and factoring both incremental and

9   decremental values;

10   computer program instructions for recording heterogeneous content of interest to said

11   user upon detection of said reading;

12   computer program instructions for finding relevant information from a database using

13   said recorded heterogeneous content of interest; and

14   computer program instructions for adapting said computer to said user's needs using said

15   relevant information.